



Smart Point-of-Sale Automation

Author Franklin Daniel
Advisor Dr. Sarosh Patel
Department of Electrical Engineering
University of Bridgeport, Bridgeport, CT

Abstract

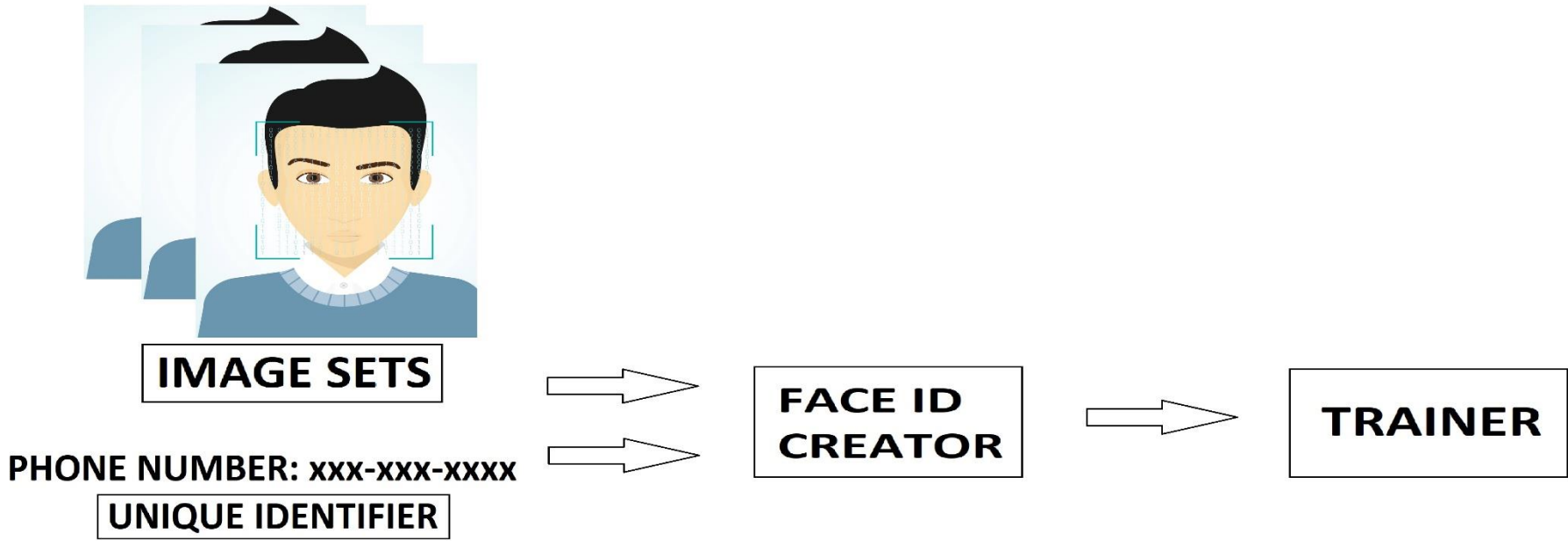
A smart assistant that can pull up the history of purchases for the customers by remembering their faces.
It works by combining Face recognition with database management.

Introduction

This system gives the customers, the recommended items, offers of the day and Items they haven't tried yet.
Thus, giving the customers variety of choices based on their interests.
It simultaneously benefits customer experience and business's sales promotion.

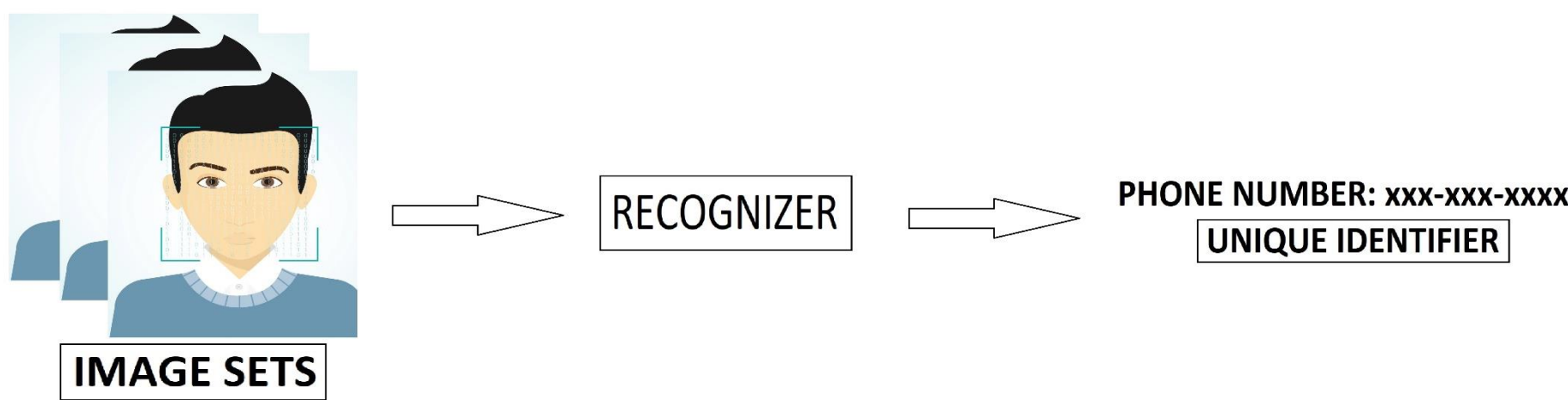
Face-Recognition

1. Setup Face ID



To setup a Face ID, we need to provide a Unique Identifier and Image sets. In this case, we are using Phone numbers as Unique Identifiers and Image sets are the Face samples. A Face ID Creator collects image samples of the user and trains the classifier.

2. Recognize Face



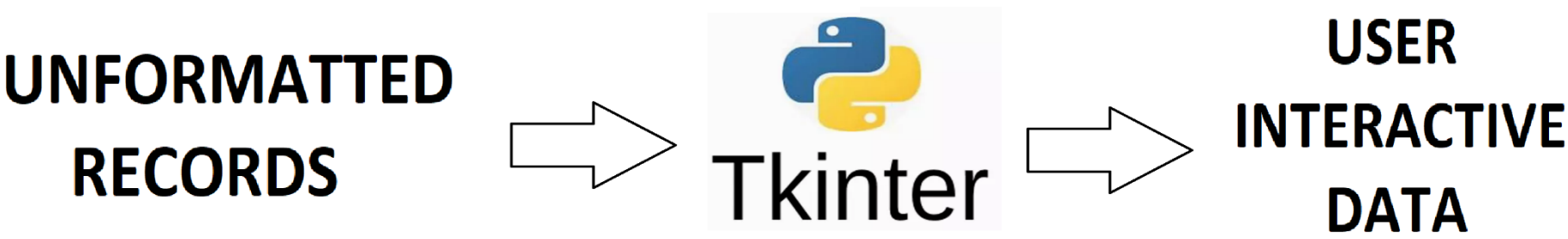
Once the Face ID is setup and the recognizer is trained, it can recognize the Faces detected on the camera. From the recognized faces, it gives out the corresponding Unique Identifier.

Database



Once the Unique Identifier is obtained, we can pull up all the records present in the Database, associated with the subject. In this application, we are pulling up the history of purchases made by the subject.
By providing an appropriate query, the requested records are extracted. These records are Unformatted-Raw-Data.

GUI



Once we obtain the unformatted records, we can process it to a User-Interactive-Format using Tkinter (Python's GUI Library).

Application Overview

1

SETUP

RECOGNIZE

QUICK

2

3

Hello Franklin

Items Never Tried

NEW

NAME	PRICE
Cheese Pizza	3.00
Vegetable Pizza	4.00
Chicken Pizza	5.00
Fish Pizza	5.00
Custom Pizza	7.00

Offers of the Day

SELECTED

NAME	PRICE
Chicken Pizza	5.00
Buffalo Wings	3.00
Water Bottle	1.00

Recommended for you

OLD

NAME	PRICE	TIMES	DATE
Buffalo Wings	3.00	3	Mon Mar 05 16:19:44 2018
Water Bottle	1.00	3	Mon Mar 05 16:19:44 2018
French Fries	2.00	1	Sun Mar 04 19:35:14 2018

THANKS, SEE YOU SOON

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This system uses Python, OpenCV for Image Recognition, Sqlite3 for Database, Tkinter for GUI

Conclusion

In a similar fashion, any sales point can be automated. This concept makes a split between the quick shoppers (Who have a typical purchase pattern) and leisure shoppers (Who would like to try new stuff). By doing so, customers can have a good shopping experience and also the business holders can promote the new items only to the related customers.